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# Offer Help Desks to Build Customer Loyalty

*An employee with a systems problem should be treated just like a consumer returning a lawn mower. Our job is to make each help call a pleasant, nonthreatening experience.*

—Andrew Delany, help desk manager for Home Depot<sup>1</sup>

## WHAT YOU'LL LEARN IN THIS CHAPTER

- Help desks are a key component in the customer support mix.
- Help desks are specialized call centers that may serve both internal and external customers.
- Help desks rely on a multi-level support model to provide appropriate assistance.
- Technology such as problem management systems, knowledge management systems, and remote support undergird modern help desks.
- Automation, centralization, and outsourcing will shape tomorrow's help desk.

## THE WAY IT IS: SUNTRUST BANKS ON HELP DESK APPLICATION<sup>2</sup>

In an article in *Computer World*, author L. Mearian discusses SunTrust Banks' use of help desks.

With more than \$100 billion in assets, SunTrust Banks, Inc., headquartered in Atlanta, Georgia, is one of the largest commercial banks in the continental United States. SunTrust's 27,500 employees provide deposit, credit, trust, and investment services to bank patrons not only in Georgia but also in Alabama, Florida, Maryland, Tennessee, Virginia, and the District of Columbia.

Like most financial service firms, SunTrust is highly automated. "To assist employees with technical problems, SunTrust runs two 24-hour call centers. About 65 percent of the call center inquiries can be resolved on the first phone call, with the other 35 percent requiring a technician's assistance; almost a quarter of those problems are related to resetting employee passwords." Typically, the SunTrust call centers field about 7,500 password reset requests per month.

Mearian says, "Most password resets involve workers who have been locked out after consecutive attempts to log on or who haven't used their passwords for an extended period of time. Each time a request comes into the call center, an incident ticket must be manually opened, and a record must be kept of how it was resolved. On average, each request ties up an IT technician for 10 minutes and costs \$20 to \$30."

Using software from Courion Corporation, SunTrust is launching an enterprisewide help desk application that will allow employees to reset their own network passwords over the Internet. "The whole objective is to reduce the manual effort in resetting passwords for employees and shorten that whole resolution cycle when an employee is locked out and can't be productive," says Nancy Tripp, president of SunTrust's Solution Center in Atlanta.

Assuming that the company meets its goal of achieving a 75 percent usage level among employees with the software during the next nine months, the system should pay for itself within two years, saving \$1.35 million to \$2.03 million in IT labor annually.

## THE ROLE OF HELP DESKS IN CUSTOMER SUPPORT

Help desks are big business. According to IDC, a leading technology research firm, the market for outsourced technical support and help desk services was \$13.1 billion at the end of 2001. By 2006, IDC expects the market to more than double, with revenues reaching \$28.4 billion.<sup>3</sup> To these figures should be added the value of in-house provided help desk services. In a recent InfoWorld survey, 90 percent of the respondents operated in-house help desks—only 10 percent outsourced.<sup>4</sup> Providing technical solutions for the computer weary has become a major part of customer service and support.



"Hello, Tech Support? ... My screen's frozen ... again!"

By permission of Leigh Rubin and Creators Syndicate, Inc.

A **help desk** is the generic name for an end-user support center. Other common names for a help desk include customer support center, information center, information technology solutions center, resource center, and **tech support**. Regardless of the name, the purpose is the same: provide technical assistance to end users.

What's an **end user**? This is how information technology professionals describe someone who is the "final" or "ultimate" user of a computer information system, rather than someone who develops the system. The end user works with the finished product after it has been fully developed and installed, rather than working with prototypes. The term "end user" often implies someone with little computer sophistication. Someone who is technically savvy is often categorized as a **power user**.

In the late 1970s, IBM coined the term "help desk" to refer to an in-house operation that screened incoming technical service request calls and routed them to the appropriate customer engineer. From that narrow focus, help desks have evolved to become a single point of contact for providing technical customer care. Today's help desk is an integral part of the customer

*Help desks offer technical support.*

*An end user (or, simply, user) is someone who works with hardware or software developed by someone else.*

*Early help desks were reactive, responding to every customer cry for help. Modern help desks are proactive, anticipating customer needs before they become problems.*

support mix. In addition to answering technical questions, help desk staff may conduct training sessions, install new hardware and software, manage network access and availability, perform user satisfaction surveys, and participate in software product improvement. Modern help desks are proactive, anticipating end-user problems and identifying ways to prevent such problems from happening in the first place.<sup>5</sup>

## WHAT DISTINGUISHES HELP DESKS?

*A help desk is a specialized call center. It has different customers, structure, and agent skill requirements.*

In many ways, help desks and call centers are similar. Both rely on people, processes, technology, and information to succeed. Both provide critical customer care. Both are an essential part of a modern customer strategy. But there are important differences. These include customer base, organizational structure, and customer representative knowledge.

### Different Customers

Probably the key difference between a call center and a help desk is the people served. As we discussed in the previous chapter, a call center is a department responsible for handling high-volume telephone traffic, whether inbound or outbound. Call centers typically serve external customers by answering questions, taking orders, responding to billing concerns, or pitching products and services through telemarketing. Help desks, on the other hand, are specialized call centers dedicated to providing solutions to technical problems. Help desks may serve external as well as internal customers.

**External customers**, or outside customers, are those who have purchased the company's products or services. Nearly every computer hardware manufacturer or software vendor operates an external help desk to respond to customer requests for technical support. For hardware suppliers, the external help desk may talk a customer through a hardware malfunction, assist in the return of failed equipment, or dispatch a field engineer to fix the problem on-site. For software suppliers, the external help desk may assist the customer in installing the product, respond to bug reports, or help with a software upgrade.

*A "bug" is an error in the software logic that causes a program to malfunction.*

External help desks provide postsale support. Most help desks provide some basic level of support at no additional cost. For premium support

services, external customers pay extra. Premium services include guaranteed response times (e.g., same day), on-site troubleshooting, or a set number of support requests within a given period (e.g., 10 calls per year). Keeping the external customer happy means managing customer expectations about promised service levels.

**Internal customers**, or in-house customers, are fellow employees who use technology supplied by the organization to perform their job. These customers look to an internal help desk for technical assistance, ranging from something as simple as resetting passwords to something as complex as troubleshooting custom software developed by the organization.

Internal customers typically expect a higher level of responsiveness from their own help desk than they would from an external help desk. After all, internal customers and internal help desk personnel are all on the same team. However, most internal help desks are run as cost centers in which help desk operations are considered an expense to the organization. As a cost center, management is rewarded for minimizing expenses. Balancing the high expectations of internal customers with the demands of cost management is not easy. Problem resolution usually takes precedence over customer service pleasantries. Self-serve solutions (**level 0 support**) are heavily promoted.<sup>6</sup>

*External help desks provide after-the-sale support to those who have purchased the company's products or services.*

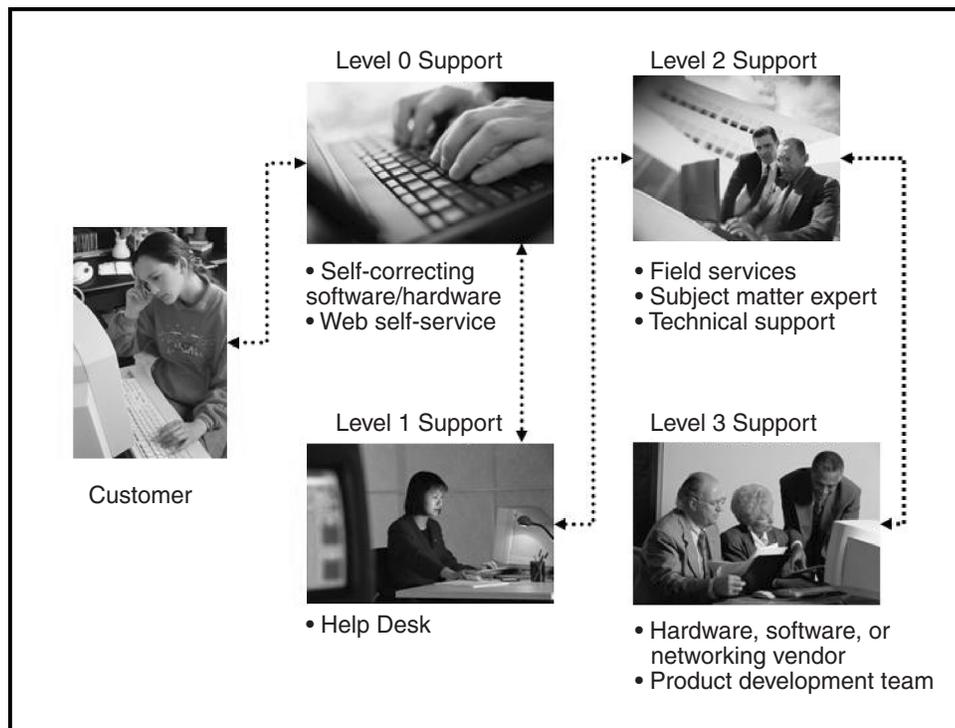
*Internal help desks provide presale, sales, and postsale service to those working for the same organization. Help desk staff may assist in the selection, acquisition, and maintenance of a wide variety of hardware and software tools.*

## Different Organization Structure

The dissimilarity in customer base between call centers and help desks accounts for significant differences in the way help desks are organized. Typically, call centers use a single-level support model. When customers call in, an automated system responds, offering callers an interactive voice response menu. The caller is then assigned a call center agent who handles the inquiry from beginning to end. This works well for routine requests. Call center customer concerns are rarely technical in nature.

Help desk customers are different. When an end user calls the help desk, it's usually out of frustration. Help desk customers aren't a patient lot. They know something is wrong with their system, they can't seem to correct it themselves, and if the problem would just go away, they could get back to being productive. By the time they get to talk to someone on the help desk, they have a "just fix it!" mentality. This often translates into "Do whatever it takes, but do it today!"

*A single-level support model is based on a one call-one agent approach to staffing.*



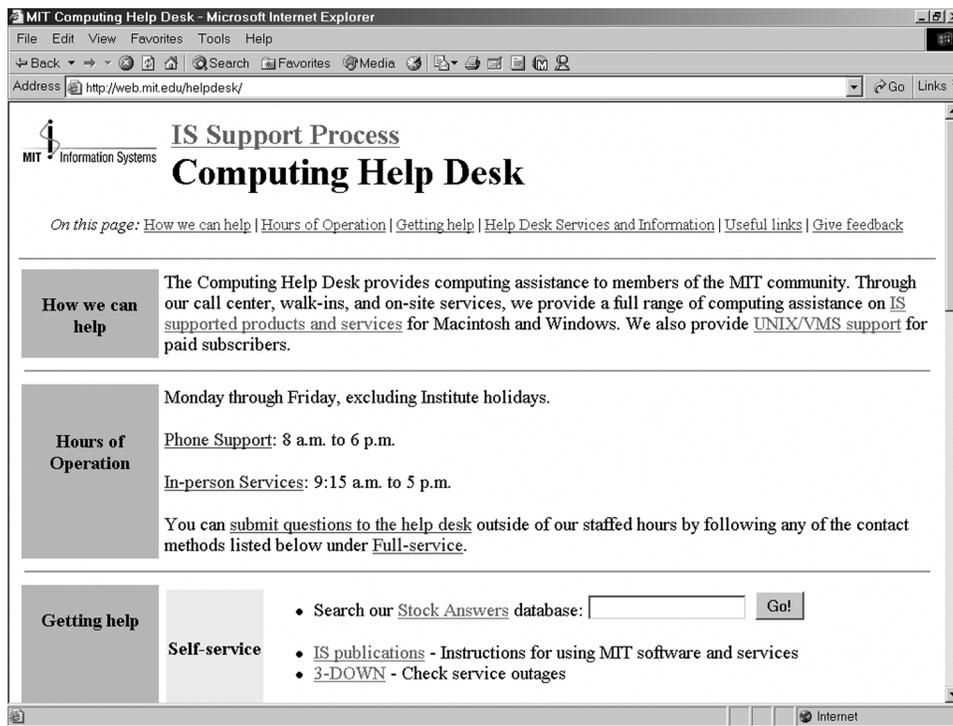
**FIGURE 7.1** Help desk multilevel support hierarchy.

*Modern help desks use a multilevel support model in providing customer assistance.*

The help desk's "whatever it takes" response is often a team effort. Up to four levels of support may be involved (see Figure 7.1). Let's follow a customer request for help desk assistance from beginning to end.

**Behind the scenes.** Sierra Heldenbrand is a modern road warrior. As an environmental advocate, she spends at least three out of four weeks each month on the road working with city planners to increase the health and diversity of urban forests. Last year she received the coveted Arborist of the Year Award from the Society of Municipal Arborists for her efforts to popularize Xeriscape alternatives in the low-rainfall cities of the Intermountain West.

As a woman constantly on the move, Sierra carries her office with her—an ultrathin notebook computer, a portable printer, and a data-enabled mobile phone. Today she is en route from Denver to Phoenix, where she is scheduled to make a presentation on water-efficient, low-maintenance landscaping later that evening. As it happens, her flight has been delayed a second time. She's a veteran traveler so she can handle that and settles down to work on her presentation. What she can't handle is the fact that her note-



**FIGURE 7.2** Sample help desk home page for internal customers. (Reprinted with permission from MIT.)

book computer and her mobile phone aren't playing well together. For the last 15 minutes, she has been trying to download (without success) some slide files she needs for tonight. She's about ready to call the office and ask for the help desk. She remembers that last week a coworker raved about how useful the help desk's new online support center is. Sierra establishes a fresh connection to her office with the data-enabled mobile phone. She opens an Internet browser and clicks her way to the help desk support center home page. Here she finds self-help options including a list of frequently asked questions (FAQs), an on-line search engine for a variety of knowledge-bases, and software wizards to diagnose common problems. The online support center provides a level 0 response, often referred to as self-serve solutions. (See Figures 7.2 and 7.3 for sample help desk home pages.)

Sierra scours the FAQs related to file download failure and comes up empty. The suggested resolutions don't cover her specific situation. Her alternative, at this point, is either linking to a Web page and submitting her question to the help desk or calling for personal assistance. She opts for the latter. Sierra disconnects from the wireless network and dials the help desk. A cheery voice from the information desk answers.



**FIGURE 7.3** Sample help desk home page for external customers. (Reprinted with permission of TealPoint.com.)

An “incident” is an end-user request for help desk assistance. A “trouble ticket” is a form for tracking incidents. “Incident ownership” refers to the assignment of primary responsibility for effecting final resolution.

Sierra now enters the world of level 1 support. Nathaniel, the help desk agent, patiently listens to Sierra’s request for assistance, coaching her through a series of questions that enable him to determine the nature of the problem. Based on their conversation, Nathaniel completes a **trouble ticket** (see Figure 7.4 for a sample) that describes the details of the system failure. He logs the **incident** onto an electronic form rather than the old paper forms used at the turn of the twentieth century. He assigns himself as the technician who will “own,” or be responsible for seeing, the problem through to resolution.

Modern help desks attempt to resolve incidents at the first point of contact—something referred to as “first contact resolution” or FCR.<sup>7</sup> For help desks handling primarily software trouble, 80 to 90 percent of the problems reported are handled on the first contact. For help desks fielding hardware problems, the percentage is much lower—around 10 to 15 percent.<sup>8</sup> Based on his training, Nathaniel determines the problem is probably hardware related and beyond the scope of his experience. He asks

The screenshot displays the Track-It! 5.0 Standard Edition interface for editing a work order. The window title is "Track-It! 5.0 Standard Edition - [Edit Work Order - 9]". The menu bar includes File, Edit, Actions, Tools, Window, and Help. The toolbar contains icons for Inventory, Purchasing, Help Desk, Training, Library, Reports, and Internet. The main interface is divided into several sections:

- General:** Includes tabs for General, User-defined Fields, History, and Advanced Search.
- Requestor:** Fields for Work Order No. (9), Workstation ID (Mobile77), Requestor (Sierra Heldenbrand), Phone (801-555-5555), Phone Ext. (555), Email Address (SierraH@GreatBasin.com), Department (Administration), and Department No. (300).
- Task:** Summary: "Mobile phone not able to transfer data files". Type: "Problem", Lookup #2, Priority: "High". Description: "Data-enabled mobile phone not communicating with notebook computer. Requestor on layover in Denver airport needs to download files before evening. Appears to be a faulty implementation of new data packet standard by mobile service provider. Escalated from Level 1 Help Desk Agent Nathaniel on 4/15/2004 3:25 PM."
- Resolution:** Technician Assigned: Ying, Date Assigned: 4/15/2004 3:16 PM, Date Due: 4/15/2004 5:00 PM. Completed Date: 4/15/2004 3:55 PM, Hours: 0.5, Charge: \$0.00. Resolution text: "Connect to home office using dial-up pay phone or airport internet service provider. Return mobile phone for inspection at earliest convenience."
- Actions:** Requestor details, Take control, Print work order, Make a copy.
- Notify:** E-mail requestor, Notify Technician.
- See Also:** Solutions.
- Footer:** Last Modified on 7/11/2002 at 3:32:36 PM by ADMIN. Buttons for Save and Cancel.

**FIGURE 7.4** Sample trouble ticket. (Reprinted courtesy of Blue Ocean Software.)

Sierra how quickly she wishes the problem resolved. She explains that she needs the files for a presentation that evening. Nathaniel records the severity of the incident on the trouble ticket, informs Sierra he is transferring her call to technical support, and forwards the problem to Ying, a level 2 specialist. This process of routing a trouble ticket from one level to the next higher level is called **escalation**. At this point, Nathaniel also transfers ownership to Ying, assigning him primary responsibility for helping Sierra.

Ying reviews the trouble ticket, deciding that his best option for troubleshooting the problem is to take control of Sierra's notebook. He asks Sierra to hang up and log back into the help desk support center. He instructs her to select the "Click Chat" option from the support center Web page. This opens up a separate dialogue window with two-way text chat. The following online conversation takes place:

Ying: "Sierra, welcome to real-time Click Chat. This facility allows us to use a single phone connection to communicate using text messages and

to do remote diagnostics at the same time. Do you have any questions before we begin?"

Sierra: "How long will this take?"

Ying: "We should know within 15 minutes if the problem is with your hardware. If you are ready, I'm going to ask you to keep your hands off the keyboard and mouse for a few minutes. Then I'm going to take control of your notebook from here. I'll use remote control to simulate the problem and run some tests. When I'm through, I'll get back to you on Click Chat."

Like a master puppeteer, Ying manipulates Sierra's notebook as if it were a high-tech marionette. Before long, Sierra's notebook is echoing the same keystrokes and mouse movements she had used earlier to try to download the file. Ying then runs a series of diagnostics that intermittently flash results on Sierra's screen. She's not quite sure what the results mean.

Ying: "Sierra, your notebook and office file server are in good order. The problem is your mobile phone. There seems to be a faulty implementation of the new packet data standard. You're losing data bits every time you try to access the file, resulting in lossy transmission."\*

Sierra: "Translation, please."

Ying: "Even though the voice feature of your cell phone works, the data feature doesn't. You continue to lose data bits when you transmit. I'm going to have to escalate your case to the vendor. In the meantime, I'd suggest you connect to the office with a pay phone or one of the airport Internet service providers. Anything else I can help you with? If not, I'll sign off."

Sierra: "I'll try a local phone and my modem. Thanks for rescuing me. I'll buy you lunch next time I'm in the office. Good-bye."

Ying: "Good-bye, Sierra."

*Help desk personnel bring order from digital chaos.*

The Sierra Heldenbrand case is quite instructive. Modern help desks have evolved from a three-tier support hierarchy to four tiers. At **level 0**, the user is expected to help him- or herself. **Level 1** responds to common concerns. **Level 2** addresses the more technical inquiries either in-house or by dispatching reps to the field to resolve problems. **Level 3** is reserved for interoperability issues like Sierra's. In her case, the standardized notebook hardware and company systems were working well. The problem lay with the mobile data communications vendor. These kinds of problems require vendor input to resolve. Integrating hardware, software, and networks is a high-level task requiring years of training. Level 3 support personnel usually work for the vendor or are part of a special forces team managed by the organization's information technology department.

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\*Lossy transmission is a data transfer where bits are lost or dropped.

## Different Knowledge

A hierarchy of support levels implies a hierarchy of knowledge. In the help desk multilevel support model, level 3 personnel have more technical depth than level 2 staff; level 2, more than level 1. There is also a difference in knowledge levels between call center agents and help desk agents. What sets apart help desks from call centers is that help desk frontline support (level 1) must be much more technically savvy than a typical call center employee.

According to Gartner, a leading IT research firm, 45 percent of help desk calls are complex in nature, dealing with such issues as application-process questions. That's because the average number of software applications supported by help desks has skyrocketed from 25 to 200 per help desk. Add to this a generation raised on computers, and you have more knowledgeable users than in the past calling the help desk with even more technical questions than before. Gone are the days in which the primary qualification for a help desk job was simply knowing how to reboot a PC.

Even more important than knowing "geek-speak" or having deep product knowledge, help desk analysts must be conversant with the world of business. As Bob Riazzi, vice president of Dell Computer Enterprise Services Group, says, "They can't just know the technology. They have to know the customers. They have to know the environment in which the technology works."<sup>9</sup>

*Help desk agents require good customer-service skills as well as technical know-how.*

## KEY HELP DESK TECHNOLOGIES

Aside from the conventional call center technologies discussed in Chapter 6, help desks have their own unique set of technologies that support operations. Specific technologies include call tracking and problem management systems, knowledge management systems, and remote support tools.<sup>10</sup> Let's take a brief look at each category and how the technology enhances the customer experience.

### Problem Management and Resolution Systems

Customer incident tracking and reporting is the focus of modern **problem management and resolution** software. The simplest of these packages runs on stand-alone PCs and manages trouble ticketing. As Figure 7.4 depicts, in the process of talking with the customer the help desk analyst captures basic customer information, categorizes the problem, describes the incident, and assigns a service

*Problem management and resolution software simplifies trouble ticket completion and incident monitoring.*

priority level. When the case is resolved, there is space to note the solution. If the problem cannot be resolved at the initial tier, the software allows the trouble ticket case to be routed, or escalated, to the next level. **Call tracking systems**, as these simple packages are called, can also produce a variety of management reports on open, overdue, and completed cases. Reports can be sorted by incident category, priority level, help desk agent, and average completion times.

Sophisticated problem management and resolution software offers features well beyond call tracking. Such software is typically Web-enabled, allowing access for both end users and help desk staff from anywhere in the world. Incident tracking is enhanced through customer profiles. When the customer contacts the help desk, the agent can easily view all related information about the customer, including the current system configuration. For help desks providing external support, the problem management system will allow the agent to verify customer entitlement to support services.

The better problem management systems also combine problem resolution with knowledge management systems. Trouble ticket solutions, for instance, are used to automatically update the support knowledge base. Finally, top-of-the-line problem management software provides integrated notification of the customer. Once a problem is resolved, the customer is automatically notified, either by e-mail, PDA, or mobile phone.

Problem management software improves the productivity of help desk personnel by automating the problem resolution process. It allows customer-service representatives to efficiently handle customer calls, log cases, set priorities, route trouble tickets, review case histories, and track help desk costs and resolution rates. But probably the most important thing problem management software does is eliminate customer dissatisfaction over lost or unanswered support requests. Such software enables help desks to provide A-plus service through continual monitoring of customer concerns from first contact to final resolution.

## Knowledge Management Systems

In the brutally competitive global economy, learning organizations stand a better chance of survival than organizations that fail to manage institutional knowledge acquisition and organizational memory. Peter Senge, director of the Organizational Learning Center at MIT, claims that "the rate at which organizations learn may become the only sustainable source of competitive advantage."<sup>11</sup> For help desks to remain competitive, they, too, must be learning organizations. **Knowledge management systems** facilitate this process by capturing human knowledge and making it

*Learning organizations are like learning individuals; they have successful strategies for finding and retaining information critical to survival.*

easily accessible to others. Such knowledge, whether in formal databases or scattered across the enterprise in the form of documents, policies, and procedures, is invaluable in solving customer problems and answering end-user requests.

Knowledge management systems combine text data capture with sophisticated search and retrieval capability. In addition to standard keyword searches with logical operators such as “and”, “or”, and “not”, knowledge management systems offer **rule-based searches** and **case-based reasoning (CBR)**. Rule-based systems often use decision trees, a branching structure of questions and possible answers. Case-based reasoning systems conduct searches using a natural language description of a problem. CBR software applies pattern recognition to select case histories that match the problem description.

While there are several stand-alone knowledge management systems on the market, help desks that use knowledge management in problem resolution usually rely on knowledge management modules integrated into their problem management and resolution systems. As described above, in these support centers each resolved problem becomes a candidate for addition to the support database. Learning becomes automatic. Help desk personnel are no longer asked to research problems that have already been solved once before. Customers get answers faster. Some help desks have even gone so far as to make access to the knowledge base directly accessible to the customer. The Office of Information Technologies of the University of Notre Dame, for example, provides a link to the “WebSupport” database from its home page (see Figure 7.5).

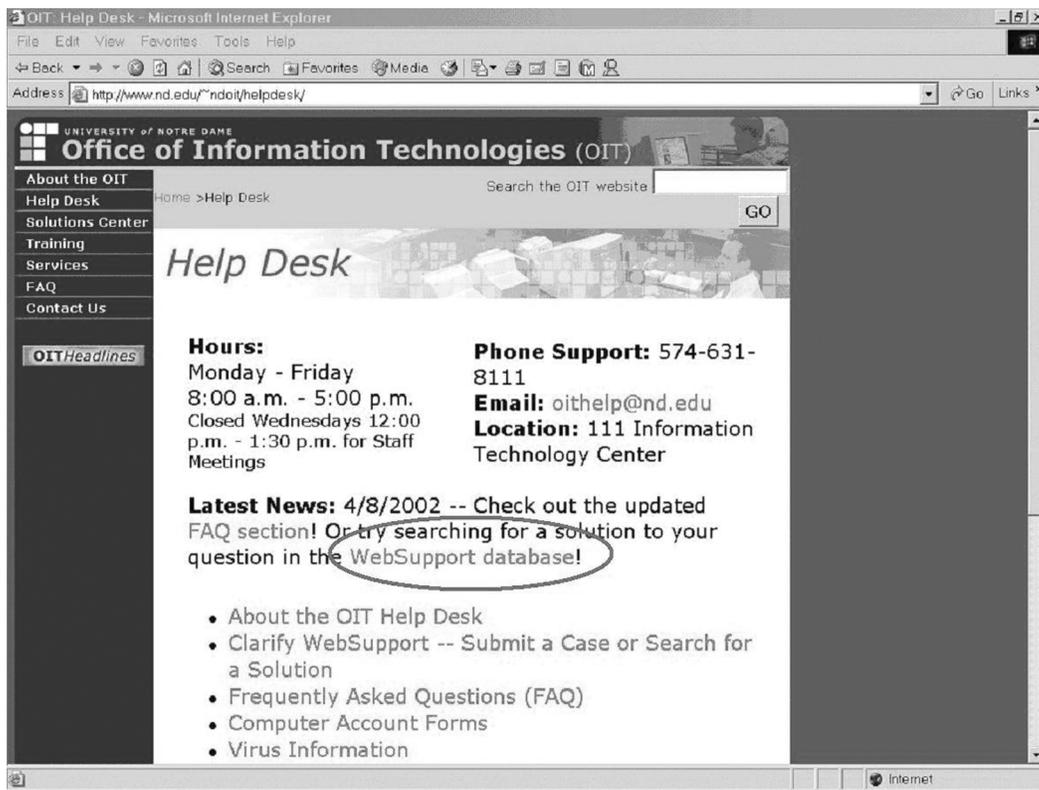
*Knowledge management systems collect the working wisdom of the organization and make it readily accessible to others.*

## Remote Support Tools

For help desks, remote support is the norm. Rarely are the end user and the help desk in the same physical location. This is especially true when a business is providing external support to customers, and it is true more often than not for internal customers who may be in a different building or even a different city. Help desks usually provide assistance from afar. To do this, help desk personnel rely on a series of remote support tools and technologies. These include remote control, remote monitoring, software distribution, and asset management systems.

**Remote control software**, like that used by Ying in the “Behind the Scenes” case above, enables the analyst to take over the customer’s machine in order to provide assistance. By temporarily controlling the customer’s keyboard, mouse, screen, CPU, file system, and peripherals, the analyst can diagnose problems, provide “just-in-time” training, download files, or even

*Providing technical help from afar is par for the course for today’s help desk agent. Remote support technologies make such long-distance assistance possible.*



**FIGURE 7.5** Sample help desk home page with link to knowledge base. (Reprinted with permission of University of Notre Dame.)

repair hardware and patch software. **Remote monitoring** tools, on the other hand, collect alerts generated by a network monitoring system and pass them through to the problem management system.

**Software distribution systems** minimize the time help desk staff spend upgrading existing applications and installing new software. Rather than personally visiting each customer to make the necessary upgrades, software distribution systems allow analysts to remotely install and configure software on the customer's workstation. Such tools ensure that all end users are running the latest supported release, minimizing calls to the help desk for assistance with obsolete software.

**Asset management systems** permit remote inspection of hardware and software installed on a network. Without any user intervention, the asset management system collects information from each machine connected to the network and then constructs an inventory of an enterprise's technology assets. To the physical inventory data, financial and operational information is added, such as cost, vendor warranty, and user identification. This provides a complete record of each

*Remote support tools and technologies bring the help desk to the customer.*

piece of equipment or software. With a comprehensive inventory, the help desk is better able to safeguard a company's computing resources and plan for asset upgrades and replacement.

## THE FUTURE OF HELP DESKS

Help desks have come a long way. Evolving from simple clearinghouses that dispatched technical inquiries to field engineers or members of the original product development team, help desk professionals now routinely answer complex technical questions themselves. Over the last three decades, help desks have assumed more and more responsibility in the march to provide cost-effective technical support. Quantity and quality of service have been the focus. There have been some growing pains. More service has not always resulted in better service. More than one end user has been burned by bad advice from a help desk.

In a recent episode at a local financial institution, the help desk analyst's so-called solution to a bank's optical disk problem resulted in destruction of the entire contents of the optical disk storage system that housed patron signature cards. Only after several months and several thousands of dollars in consulting fees was the bank able to recover enough signature cards to keep the bank examiners at bay during the annual audit. The information technology director still mourns the day he called the vendor help desk to ask how to integrate the new transaction server with the existing optical drives.

Fortunately, such horror stories are not the norm. Enlightened management understands the key role help desks play in providing A-plus service. In an effort to improve service quality, such management monitors industry trends, adopting promising new initiatives. Three key initiatives that will shape the future of help desks are automation, centralization, and outsourcing.

*Today's help desks are being shaped by automation, centralization, and outsourcing efforts.*

### Automation

Think of the help desk as a system—a collection of components that converts inputs into useful outputs. For help desks, inputs include customer problem notification, questions, inquiries, and requests. Respective outputs would be problem resolution, instructions, information, and delivery of new products or services.

Converting customer problems and concerns into end-user solutions requires effective processes. **Automation** is about making those conversion processes as efficient as possible. The strategy is twofold: (1) computerize manual tasks and (2) off-load as many help desk tasks as possible to the customer. Let's look at an example of each.

*Help desk automation increases agent productivity, yielding superior technical support from the same resources.*

Prior to the computerization of help desk requests at computer-aided design software giant Autodesk, it took a little over three minutes for help desk staff to manually enter problem descriptions received by phone and e-mail. Today common help desk service requests are entered directly by customers, rather than help desk staff, through the company intranet (in-house Internet site). End users are given Web forms for office relocations, network account and password changes, and trouble tickets. Help desk automation at Autodesk has resulted not only in computerization of a manual process but also in the off-loading of form completion to the end user.<sup>12</sup>

Another example of task off-loading is FAQs. By providing readily accessible answers to common questions, help desks empower end users to help themselves. Web pages and interactive voice response systems are typical channels for FAQs. For customer software, error message dialogue boxes provide built-in self-help, minimizing frantic calls to the support center.

## Centralization

"Network problem? I'm sorry. This is the on-line registration support team. Have you tried . . ." Sound familiar? There was a time when, if you needed help, it was more of a problem to track down the right support center than to work through a solution with the help desk agent. **Centralization** addresses the support runaround. By providing a single point of contact for end users, organizations ensure a seamless customer experience.

*Centralization may be either physical or virtual. It often leads to cost-saving consolidation.*

Centralization may be either physical or virtual. Physical centralization locates all help desk personnel in a single site. For small operations spread over a few time zones, this makes sense. Centralization in one low-cost facility consolidates operations and eliminates duplication.

For far-flung enterprises operating around the globe, virtual centralization is a better choice. In this form, centralization is achieved by networking support centers in different locations, giving the impression of a single contact point. Overlap is eliminated, and scarce information technology people and resources are consolidated. To provide 24-hour coverage

*A queue is a line. Like financial institutions and airlines, help desks have found it's easier to staff for a single queue than for multiple queues.*

from separate time zones, multinationals either run three shifts or geographically disperse support centers eight hours apart.

Probably the primary benefit of centralization is the opportunity for the **consolidation** of work flow. This makes it possible to redeploy valuable second- and third-tier support personnel. By consolidating support requests and managing a single queue, help desk personnel can

be redeployed to their highest use. Tier 3 personnel no longer field tier 1 questions. Help desk staff now focus on what they are good at.

## Outsourcing

While only 10 percent of U.S. companies currently outsource their help desks, 18 percent plan to do so in the near future.<sup>13</sup> Availability of skills isn't the issue—it's availability of personnel. Help desks can get trained support staff; they just can't get enough of them where they need them. **Outsourcing** provides a ready supply of on-call tech support experts.

Help desk outsourcing takes several forms. At its simplest, outsourcing means that organizations contract with hardware vendors to provide hardware and peripheral

*Outsourcing is the opposite of insourcing. Rather than furnishing services in-house, outsourcing uses external suppliers to provide the service.*

### Another Look

### Outsourcing Isn't for Everyone

Although help desk outsourcing is a growing trend, we won't see 100 percent participation anytime soon. Outsourcing isn't for everyone. In fact, there are good reasons not to outsource the help desk. Off-loading the help desk to the lowest bidder could undermine your business strategy.<sup>14</sup>

The help desk is one of many business processes that assist you in profitably managing your relationships with your customers. Outsourcing is a business strategy that should only be implemented after a thoughtful evaluation of the existing process and careful selection of a strategic partner. Knowing your help desk cost structure is a must. According to a Help Desk Institute poll, 54 percent of **help desk professionals** had no idea what it costs to service a support request.<sup>15</sup> Worse, many of these same organizations also did not have a grasp of existing service levels.

Before transferring your help desk operation to a service provider, you should have, at a minimum, statistics on trouble ticket volume, average response time, and time to resolution. Such information is critical in negotiating a **service level agreement (SLA)** with the outsource supplier. And once you move the help desk outside, your job still isn't over. You will need to manage this relationship like you would with any vendor. This calls for continuous monitoring of service levels and customer satisfaction.

In giving up the help desk, you give up the most significant point of contact with your customer to an outsider. This can backfire. "Information Technology is a strategic tool and how you leverage it determines your competitiveness," says Yankee Group analyst Colin Mahoney. "When you outsource any function, any strategic use it once served will die a quick death."<sup>16</sup>

Finally, outsourcing may not be appropriate for proprietary software. If your help desk supports internally developed applications that change frequently, keeping external staff up-to-date may be difficult.

*A service level agreement, or SLA, is a formal document that specifies the services the help desk will provide and how the delivery of those services is measured.*

support over the life of purchased equipment. Operating systems and off-the-shelf applications are pre-installed at the vendor's factory. On site, the enterprise usually maintains a part inventory that the service provider uses to make routine repairs. Larger repairs are returned to the nearest vendor service center. As part of the outsource service agreement, the enterprise and the vendor will negotiate an agreed-upon turnaround time for service and repairs.

At the other end of the help desk outsourcing spectrum, some organizations have chosen to outsource not just hardware support but all technical support. Enterprises that outsource everything contract with management service providers (MSPs) to provide the equivalent of an external or internal help desk. Big-name MSPs include Electronic Data Systems (EDS), IBM Global Services, and Computer Services Corporation. According to the Yankee Group, a leading IT research firm, the market for managed services in 2002 was \$4.5 billion.<sup>17</sup>

## A FINAL THOUGHT

In 1984, Apple Computer introduced the Macintosh—"the computer for the rest of us." Part of the allure of the Mac was its simplicity of operation. The windows, icons, menus, and pointer (WIMP) interface made the once-feared little boxes somehow user friendly. Print ads encouraged us to throw away the multivolume user manuals that accompanied the IBM PC and experience the joy of intuitive computing. In fact, some Mac adherents claimed that any piece of software that required a manual was poorly designed. After all, you don't need a manual to drive something as complex as a car.

Or do you? Ever try to update the clock on your car stereo for daylight saving time? It never fails: you punch a few buttons, invariably messing up all your favorite preset radio stations, only to find the time hasn't changed at all. In an uncomfortable admission of your ignorance, you eventually consult the car manufacturer's manual to reset the clock.

Like modern autos, modern computers are becoming increasingly more complex, not less. The myth of the simple-to-use, "manual-less" computer is just that—a myth. Increased complexity means more demands on the help desk, not less. As long as there are new features (and it's the new features that keep hardware and software companies in business), there will be a need for a friendly resource to dispel the mystery of the "new." Help desks will continue to evolve, but their primary function of providing an A-plus technical experience will not go away anytime soon.

## *Summary of Key Ideas*

- A help desk provides technical support to internal and external customers.
- An end user is the final user of a computer system rather than the person who develops it.
- Help desks evolved from call centers that routed technical service requests.
- Call centers and help desks differ in terms of customers, organizational structure, and customer representative knowledge levels.
- Help desks are specialized call centers that may serve both internal and external customers. Internal customers are fellow employees who use technology supplied by the organization. External customers are those who have purchased a company's products or services.
- A multilevel support model relies on a hierarchy of expertise to provide technical assistance. Level 0 support refers to customer self-service. Level 1 responds to common concerns. Level 2 addresses more technical inquiries. Level 3 tackles interoperability issues between hardware, software, and networks.
- In addition to customer-service skills, help desk agents must also have an in-depth knowledge of technology in the workplace.
- Key help desk technologies include problem management systems, knowledge management systems, and remote support.
- Problem management systems enable the help desk to track a customer call from first contact to final resolution.
- Knowledge management systems capture technical solutions developed by the help desk and make them readily available to others.
- Remote support tools enable help desk personnel to provide technical assistance from afar. Remote support software allows the analyst to take temporary control of an end user's computer system in order to perform diagnostics and make repairs. Software distribution systems automate the installation and upgrading of applications. Asset management systems provide an automated inventory of an organization's technology assets.
- Three trends shaping the future of help desks are automation, centralization, and outsourcing. Automation seeks to computerize help desk tasks in order to make the operation as efficient as possible. Centralization brings all help desk services under one roof, whether physically or virtually. Outsourcing turns over selected help desk responsibilities to an outside service provider.

## Key Terms and Concepts

asset management system	knowledge management system
automation	level 0 to level 3 support
call tracking system	outsourcing
case-based reasoning (CBR)	power user
centralization	problem management and resolution
consolidation	remote control and monitoring software
end user	rule-based search
escalation	service level agreement (SLA)
external customer	software distribution system
help desk	tech support
incident	trouble ticket
internal customer	

## Application Activities

1. Interview three of your classmates, friends, or coworkers regarding their experiences getting technical assistance from a help desk. Describe the process they took to get answers to their questions. For example, did they use self-service options or contact the help desk directly? Were their questions easily answered, or was their request escalated to someone with a higher level of expertise? How long did it take to get a resolution? Were they satisfied with the service? If not, why not?
2. Locate an online technical support knowledge base. (Most hardware and software vendors offer such databases on their Web sites.) Explore the knowledge base by searching for answers to several questions. Then describe your experience. Did the site offer various search strategies or only keyword search? If rule-based or case-based reasoning options were provided, compare the search performance over conventional keyword lookup. Were these alternatives faster? Slower? Just as successful?
3. Using the Web, research problem management and resolution systems. Download at least one demo. Run the demo, and then describe your experience with it. Is this system geared to internal customers, external customers, or both? How easy was it to complete a trouble ticket? What kinds of management reports or graphs are available? Would you recommend this product? If so, for what size and type of help desk?

4. Most modern help desks put a lot of resources into ensuring their customers can help themselves. Look on the Web until you find a help desk home page that offers level 0 support to its customers. What kinds of self-assistance are provided? What are the benefits of this level of support to the customer? What are the benefits to the help desk? Imagine you work as a help desk analyst for a support group that does not have customer self-service options. Based on your investigation, write a short memo to your boss encouraging the addition of level 0 support to your help desk.
5. Talk to three friends, relatives, classmates, or coworkers who have experienced outsourcing in some aspect of their lives. What services were outsourced? Were the outsourcing efforts successful? What were the attitudes of the people inside and outside the organization toward outsourcing? (Note: For those in government or nonprofit organizations, outsourcing is sometimes referred to as "privatization.") What recommendations would you make to someone who is considering outsourcing? Write up your findings and comments in a short report.

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